Journal of Biomedical Materials Research
Author Index—Volume 60

Aguado, E. See Khairoun, I., 633
Akutsu, T. See Shimizu, T., 110
Aldred, S. See Barralet, J. E., 360
Alexakis, C. See Meddahi, A., 497
Amis, E. J. See Washburn, N. R., 20
Amstutz, H. C. See Beaulé, P. E., 411
Anastase-Ravion, S.
—; Carreno, M.-P.; Blondin, C.; Ravion, O.; Champion, J.; Chaubet, F.; Haeffner-Cavaillon, N.; Letourneur, D.: Heparin-like polymers modulate proinflammatory cytokine production by lipopolysaccharide-stimulated human monocytes, 375
Anderson, J. M. See Collier, T. O., 487
Anderson, J. M. See Shive, M. S., 148
Ando, K. See Shinzato, S., 556
Angello, J. C. See McDevitt, T. C., 472
Anselme, K.
—; Bigerelle, M.; Noël, B.; Iost, A.; Hardouin, P.: Effect of grooved titanium substratum on human osteoblastic cell growth, 529
Aparicio, C. See Rodríguez-Lorenzo, L. M., 159
Archambault, J. G. See Cornelius, R. M., 622
Asano, T. See Uchida, M., 277

Babukutty, Y. See Zhang, Q., 502
Baker, A. B. See Sanders, J. E., 36
Bannister, S. R.;
—; Lohmann, C. H.; Liu, Y.; Sylvia, V. L.; Cochran, D. L.; Dean, D. D.; Boyan, B. D.; Schwartz, Z.: Shear force modulates osteoblast response to surface roughness, 167
Barekzi, N. A. See Poelstra, K. A., 206
Barralet, J. E.
—; Aldred, S.; Wright, A. J.; Coombes, A. G. A.: *In vitro* behavior of albumin-loaded carbonate hydroxyapatite gel, 360
Barritault, D. See Meddahi, A., 497
Beaulé, P. E.
—; Campbell, P. A.; Walker, P. S.; Schmalzried, T. P.; Dorey, F. J.; Blunn, G. W.; Bell, C. J.; Yahia, L'H.; Amstutz, H. C.: Polyethylene wear characteristics *in vivo* and in a knee simulator, 411
Bell, C. J. See Beaulé, P. E., 411
Bellamkonda, R. V. See Kader, K. N., 405
Berry, L. See Cornelius, R. M., 622
Beutler, T. See Li, D., 325
Bhatia, S. N. See Liu, V. A., 126
Bigerelle, M. See Anselme, K., 529
Blondin, C. See Anastase-Ravion, S., 375
Blunn, G. W. See Beaulé, P. E., 411
Bosetti, M.
—; Hench, L.; Cannas, M.: Interaction of bioactive glasses with peritoneal macrophages and monocytes *in vitro*, 79
Bouler, J. M. See Khairoun, I., 633
Boyan, B. D. See Bannister, S. R., 167
Braham, C. See Millet, P., 679
Brash, J. L. See Cornelius, R. M., 622
Brash, J. L. See Jahangir, A. R., 135
Brodbeck, W. G. See Shive, M. S., 148
Brown, R. F. See Conzone, S. D., 260
Brunette, D. M. See Wieland, M., 434
Buck, D. C. See Frank, E. H., 118
Buser, D. See Li, D., 325
Busscher, H. J. See de Vos, P., 252

Cabrerizo-Vilchez, M. A. See Osorio, R., 316
Cai, K.
—; Yao, K.; Cui, Y.; Lin, S.; Yang, Z.; Li, X.; Xie, H.; Qing, T.; Luo, J.: Surface modification of poly (D,L-lactic acid) with chitosan and its effects on the culture of osteoblasts *in vitro*, 398
Caiazza, S. See Malchiodi-Albedi, F., 548
Campbell, P. A. See Beaulé, P. E., 411
Cannas, M. See Bosetti, M., 79
Carreno, M.-P. See Anastase-Ravion, S., 375
Caruelle, J.-P. See Meddahi, A., 497
Case, E. D. See Hoepfner, T. P., 643
Caterson, E. J. See Li, W.-J., 613
Ceballos, D.
—; Valero-Cabré, A.; Valderrama, E.; Schüttler, M.; Stieglitz, T.; Navarro, X.: Morphologic and functional evaluation of peripheral nerve fibers regenerated through polyimide sieve electrodes over long-term implantation, 517
Ceballos, L. See Osorio, R., 316
Champion, J. See Anastase-Ravion, S., 375
Chan, A. K. C. See Cornelius, R. M., 622
Chang, C. C. See, Rosenson-Schloss, R. S., 8
Chang-Chien, C. See Matsumoto, T., 651
Chapman-Sheath, P. J. See Yu, Y., 392
Chaubet, F. See Anastase-Ravion, S., 375
Chaubet, F. See Letourneur, D., 94
Chehroudi, B. See Wieland, M., 434
Chen, C.-C.
—; Chen, R. C.-S.; Huang, S.-T.: Enzymatic responses of human deciduous pulpal fibroblasts to dental restorative materials, 452
Chen, R. C.-S. See Chen, C.-C., 452
Chluba, J. See Tryoen-Tóth, P., 657
Chosa, E. See Matsumoto, M., 101
Cochran, D. L. See Bannister, S. R., 167
Cochran, D. L. See Li, D., 325
Collier, T. O.
—; Anderson, J. M.: Protein and surface effects on monocyte and macrophage adhesion, maturation, and survival, 487
Colton, E. See Shive, M. S., 148
Conconi, M. T. See Dettin, M., 466
Constantinides, A. See Rosenson-Schloss, R. S., 8
Conzone, S. D.
—; Brown, R. F.; Day, D. E.; Ehrhardt, G. J.: *In vitro* and *in vivo* dissolution behavior of a dysprosium lithium borate glass

Journal of Biomedical Materials Research
Author Index—Volume 60

Aguado, E. See Khairoun, I., 633
Akutsu, T. See Shimizu, T., 110
Aldred, S. See Barralet, J. E., 360
Alexakis, C. See Meddahi, A., 497
Amis, E. J. See Washburn, N. R., 20
Amstutz, H. C. See Beaulé, P. E., 411
Anastase-Ravion, S.
—; Carreno, M.-P.; Blondin, C.; Ravion, O.; Champion, J.; Chaubet, F.; Haeffner-Cavaillon, N.; Letourneur, D.: Heparin-like polymers modulate proinflammatory cytokine production by lipopolysaccharide-stimulated human monocytes, 375
Anderson, J. M. See Collier, T. O., 487
Anderson, J. M. See Shive, M. S., 148
Ando, K. See Shinzato, S., 556
Angello, J. C. See McDevitt, T. C., 472
Anselme, K.
—; Bigerelle, M.; Noël, B.; Iost, A.; Hardouin, P.: Effect of grooved titanium substratum on human osteoblastic cell growth, 529
Aparicio, C. See Rodríguez-Lorenzo, L. M., 159
Archambault, J. G. See Cornelius, R. M., 622
Asano, T. See Uchida, M., 277

Babukutty, Y. See Zhang, Q., 502
Baker, A. B. See Sanders, J. E., 36
Bannister, S. R.;
—; Lohmann, C. H.; Liu, Y.; Sylvia, V. L.; Cochran, D. L.; Dean, D. D.; Boyan, B. D.; Schwartz, Z.: Shear force modulates osteoblast response to surface roughness, 167
Barekzi, N. A. See Poelstra, K. A., 206
Barralet, J. E.
—; Aldred, S.; Wright, A. J.; Coombes, A. G. A.: *In vitro* behavior of albumin-loaded carbonate hydroxyapatite gel, 360
Barritault, D. See Meddahi, A., 497
Beaulé, P. E.
—; Campbell, P. A.; Walker, P. S.; Schmalzried, T. P.; Dorey, F. J.; Blunn, G. W.; Bell, C. J.; Yahia, L'H.; Amstutz, H. C.: Polyethylene wear characteristics *in vivo* and in a knee simulator, 411
Bell, C. J. See Beaulé, P. E., 411
Bellamkonda, R. V. See Kader, K. N., 405
Berry, L. See Cornelius, R. M., 622
Beutler, T. See Li, D., 325
Bhatia, S. N. See Liu, V. A., 126
Bigerelle, M. See Anselme, K., 529
Blondin, C. See Anastase-Ravion, S., 375
Blunn, G. W. See Beaulé, P. E., 411
Bosetti, M.
—; Hench, L.; Cannas, M.: Interaction of bioactive glasses with peritoneal macrophages and monocytes *in vitro*, 79
Bouler, J. M. See Khairoun, I., 633
Boyan, B. D. See Bannister, S. R., 167
Braham, C. See Millet, P., 679
Brash, J. L. See Cornelius, R. M., 622
Brash, J. L. See Jahangir, A. R., 135
Brodbeck, W. G. See Shive, M. S., 148
Brown, R. F. See Conzone, S. D., 260
Brunette, D. M. See Wieland, M., 434
Buck, D. C. See Frank, E. H., 118
Buser, D. See Li, D., 325
Busscher, H. J. See de Vos, P., 252

Cabrerizo-Vilchez, M. A. See Osorio, R., 316
Cai, K.
—; Yao, K.; Cui, Y.; Lin, S.; Yang, Z.; Li, X.; Xie, H.; Qing, T.; Luo, J.: Surface modification of poly (D,L-lactic acid) with chitosan and its effects on the culture of osteoblasts *in vitro*, 398
Caiazza, S. See Malchiodi-Albedi, F., 548
Campbell, P. A. See Beaulé, P. E., 411
Cannas, M. See Bosetti, M., 79
Carreno, M.-P. See Anastase-Ravion, S., 375
Caruelle, J.-P. See Meddahi, A., 497
Case, E. D. See Hoepfner, T. P., 643
Caterson, E. J. See Li, W.-J., 613
Ceballos, D.
—; Valero-Cabré, A.; Valderrama, E.; Schüttler, M.; Stieglitz, T.; Navarro, X.: Morphologic and functional evaluation of peripheral nerve fibers regenerated through polyimide sieve electrodes over long-term implantation, 517
Ceballos, L. See Osorio, R., 316
Champion, J. See Anastase-Ravion, S., 375
Chan, A. K. C. See Cornelius, R. M., 622
Chang, C. C. See, Rosenson-Schloss, R. S., 8
Chang-Chien, C. See Matsumoto, T., 651
Chapman-Sheath, P. J. See Yu, Y., 392
Chaubet, F. See Anastase-Ravion, S., 375
Chaubet, F. See Letourneur, D., 94
Chehroudi, B. See Wieland, M., 434
Chen, C.-C.
—; Chen, R. C.-S.; Huang, S.-T.: Enzymatic responses of human deciduous pulpal fibroblasts to dental restorative materials, 452
Chen, R. C.-S. See Chen, C.-C., 452
Chluba, J. See Tryoen-Tóth, P., 657
Chosa, E. See Matsumoto, M., 101
Cochran, D. L. See Bannister, S. R., 167
Cochran, D. L. See Li, D., 325
Collier, T. O.
—; Anderson, J. M.: Protein and surface effects on monocyte and macrophage adhesion, maturation, and survival, 487
Colton, E. See Shive, M. S., 148
Conconi, M. T. See Dettin, M., 466
Constantinides, A. See Rosenson-Schloss, R. S., 8
Conzone, S. D.
—; Brown, R. F.; Day, D. E.; Ehrhardt, G. J.: *In vitro* and *in vivo* dissolution behavior of a dysprosium lithium borate glass

designed for the radiation synovectomy treatment of rheumatoid arthritis, 260
Coombes, A. G. A. See Barralet, J. E., 360
Cornelius, R. M. See Jahangir, A. R., 135
Cornelius, R. M.
—; Archambault, J. G.; Berry, L.; Chan, A. K. C.; Brash, J. L.: Adsorption of proteins from infant and adult plasma to biomaterial surfaces, 622
Cui, Y. See Cai, K., 398

D'Angelo, G. See Letourneur, D., 94
Daculsi, G. See Khairoun, I., 633
Dalton, B. A. See Walboomers, X. F., 445
Day, D. E. See Conzone, S. D., 260
de Andrade, M. C. See Sena, L. Á.
de Vos, P.
—; Hoogmoed, C. G.; Busscher, H. J.: Chemistry and biocompatibility of alginate-PLL capsules for immunoprotection of mammalian cells, 252
Dean, D. See Vehof, J. W. M., 241
Dean, D. D. See Bannister, S. R., 167
Debari, K. See Shimizu-Ishiura, M., 269
Dettin, M.
—; Conconi, M. T.; Gambaretto, R.; Pasquato, A.; Folin, M.; Di Bello, C.; Parnigotto, P. P.: Novel osteoblast-adhesive peptides for dental/orthopedic biomaterials, 466
Dhert, W. J. A. See Oosterbos, C. J. M., 339
Di Bello, C. See Dettin, M., 466
Dohi, Y. See Ikeuchi, M., 61
Dorey, F. J. See Beaulé, P. E., 411
Dunn, M. G. See Ohan, M. P., 384

Ehrhardt, G. J. See Conzone, S. D., 260
Elamanchili, P. See Newman, K. D., 480
Elgendy, H. M. See Washburn, N. R., 20
Evans, M. D. See Walboomers, X. F., 445

Felts, A. G. See Poelstra, K. A., 206
Ferguson, S. J. See Li, D., 325
Ferreira, J. M. F. See Rodríguez-Lorenzo, L. M., 159
Ferreira, J. M. F. See Rodríguez-Lorenzo, L. M., 232
Fisher, J. P. See Vehof, J. W. M., 241
Fleer, A. See Oosterbos, C. J. M., 339
Folin, M. See Dettin, M., 466
Formisano, G. See Malchiodi-Albedi, F., 548
Frank, E. H.
—; Gong, X.; Sipe, R. V.; Buck, D. C.; Hollinger, J. O.: Transverse process fusion with bovine anorganic bone, 118
Fu, T. See Han, Y., 511

Gambaretto, R. See Dettin, M., 466
Gauthier, O. See Khairoun, I., 633
Ginebra, M. P. See Rodríguez-Lorenzo, L. M., 159
Girardin, E. See Millet, P., 679
Glant, T. T. See Hallab, N. J., 420
Gogolewski, S. See Gorna, K., 592
Golledge, S. L. See Sanders, J. E., 36
Gong, X. See Frank, E. H., 118
Gorna, K.
—; Gogolewski, S.: Biodegradable polyurethanes for implants. II. *In vitro* degradation and calcification of materials from poly(ε-caprolactone)–poly(ethylene oxide) diols and various chain extenders, 592
Grainger, D. W. See Poelstra, K. A., 206
Grassl, E. D.
—; Oegema, T. R.; Tranquillo, R. T.: Fibrin as an alternative biopolymer to type-I collagen for the fabrication of a media equivalent, 607
Grunkemeier, J. M. See Tsai, W.-B., 348

Haeffner-Cavaillon, N. See Anastase-Ravion, S., 375
Haikel, Y. See Tryoen-Tóth, P., 657
Hallab, N. J.
—; Vermes, C.; Messina, C.; Roebuck, K. A.; Glant, T. T.; Jacobs, J. J.: Concentration- and composition-dependent effects of metal ions on human MG-63 osteoblasts, 420
Hamada, Y. See Matsumoto, T., 651
Han, Y.
—; Xu, K.; Montay, G.; Fu, T.; Lu, J.: Evaluation of nanostructured carbonated hydroxyapatite coatings formed by a hybrid process of plasma spraying and hydrothermal synthesis, 511
Hardouin, P. See Anselme, K., 529
Hauschka, S. D. See McDevitt, T. C., 472
Hayashi, S. See Siriphannon, P., 175
Helman, J. I. See Kohn, D. H., 292
Hench, L. See Bosetti, M., 79
Hirt, H. P. See Li, D., 325
Hoepfner, T. P.
—; Case, E. D.: The porosity dependence of the dielectric constant for sintered hydroxyapatite, 643
Hollinger, J. O. See Frank, E. H., 118
Hoogmoed, C. G. See de Vos, P., 252
Horbett, T. A. See Tsai, W.-B., 348
Horiuchi, K. See Ikeuchi, M., 61
Huang, H.-H.
—; Effect of chemical composition on the corrosion behavior of Ni-Cr-Mo dental casting alloys, 458
Huang, S.-T. See Chen, C.-C., 452
Hyon, S.-H. See Matsumura, K., 309

Ikeuchi, M.
—; Dohi, Y.; Horiuchi, K.; Ohgushi, H.; Noshi, T.; Yoshikawa, T.; Yamamoto, K.; Sugimura, M.: Recombinant human bone morphogenetic protein-2 promotes osteogenesis within atelopeptide type I collagen solution by combination with rat cultured marrow cells, 61
Inoue, M. See Matsumoto, T., 651
Iost, A. See Anselme, K., 529
Isoi, Y. See Shimizu, T., 110
Ito, A.
—; Kawamura, H.; Miyakawa, S.; Layrolle, P.; Kanzaki, N.; Treboux, G.; Onuma, K.; Tsutsumi, S.: Resorbability and solubility of zinc-containing tricalcium phosphate, 224
Iwata, H. See Matsumura, K., 309

Jacobs, J. J. See Hallab, N. J., 420
Jahangir, A. R.
—; McClung, W. G.; Cornelius, R. M.; McCloskey, C. B.; Brash, J. L.; Santerre, J. P.: Fluorinated surface-modifying macromolecules: modulating adhesive protein and platelet interactions on a polyether-urethane, 135
Jansen, J. A. See ter Brugge, P. J., 70
Jansen, J. A. See Vehof, J. W. M., 241
Jansen, J. A. See Walboomers, X. F., 445
Jastromb, W. E. See Liu, V. A., 126

Kader, K. N.
—; Sweany, J. M.; Bellamkonda, R. V.: Cationic lipid-mediated transfection of bovine aortic endothelial cells inhibits their attachment, 405
Kameshima, Y. See Siriphannon, P., 175
Kanno, M.
—; Kawakami, H.; Nagaoka, S.; Kubota, S.: Biocompatibility of fluorinated polyimide, 53
Kanzaki, N. See Ito, A., 224
Karim, A. See Washburn, N. R., 20
Kawakami, H. See Kanno, M., 53
Kawamura, H. See Ito, A., 224
Khairoun, I.
—; Magne, D.; Gauthier, O.; Bouler, J. M.; Aguado, E.; Daculsi, G.; Weiss, P.: *In vitro* characterization and *in vivo* properties of a carbonated apatite bone cement, 633
Kikuchi, A. See Shimizu, T., 110
Kim, H.-M. See Uchida, M., 277
Kim, K. See Zhu, X., 333
Kim, S. See Zhu, X., 333
Kim, Y. H. See Park, H. D., 186
Kitamura, Y. See Shinzato, S., 556
Kitamura, Y. See Shinzato, S., 585
Ko, F. K. See Li, W.-J., 613
Kodama, M. See Zhang, Q., 502
Kogoma, M. See Zhang, Q., 502
Kohn, D. H.
—; Sarmadi, M.; Helman, J. I.; Krebsbach, P. H.: Effects of pH on human bone marrow stromal cells *in vitro:* Implications for tissue engineering of bone, 292
Kokubo, T. See Shinzato, S., 556
Kokubo, T. See Shinzato, S., 585
Kokubo, T. See Uchida, M., 277
Krebsbach, P. H. See Kohn, D. H., 292
Kubota, S. See Kanno, M., 53
Kwon, G. S. See Newman, K. D., 480

Lapp, C. A.
—; Schuster, G. S.: Effects of DMAEMA and 4-methoxyphenol on gingival fibroblast growth, metabolism, and response to interleukin-1, 30
Latour, R. A., Jr.
—; Rini, C. J.: Theoretical analysis of adsorption thermodynamics for hydrophobic peptide residues on SAM surfaces of varying functionality, 564
Laurencin, C. T. See Li, W.-J., 613
Layrolle, P. See Ito, A., 224
Lee, C. H. See Singla, A., 368
Lee, J. H.
—; Oh, S. H.: MMA/MPEOMA/VSA copolymer as a novel blood-compatible material: Effect of PEO and negatively charged side chains on protein adsorption and platelet adhesion, 44
Lee, W. K. See Park, H. D., 186
Lee, W.-S. See Shimizu-Ishiura, M., 269
Letourneur, D. See Anastase-Ravion, S., 375
Letourneur, D.
—; Machy, D.; Pellé, A.; Marcon-Bachari, E.; D'Angelo, G.; Vogel, M.; Chaubet, F.; Michel, J.-B.: Heparin and non-heparin-like dextrans differentially modulate endothelial cell proliferation: *In vitro* evaluation with soluble and crosslinked polysaccharide matrices, 94
Li, D.
—; Ferguson, S. J.; Beutler, T.; Cochran, D. L.; Sittig, C.; Hirt, H. P.; Buser, D.: Biomechanical comparison of the sandblasted and acid-etched and the machined and acid-etched titanium surface for dental implants, 325
Li, W.-J.
—; Laurencin, C. T.; Caterson, E. J.; Tuan, R. S.; Ko, F. K.: Electrospun nanofibrous structure: A novel scaffold for tissue engineering, 613
Li, X. See Cai, K., 398
Lin, S. See Cai, K., 398
Liu, V. A.
—; Jastromb, W. E.; Bhatia, S. N.: Engineering protein and cell adhesivity using PEO-terminated triblock polymers, 126
Liu, Y. See Bannister, S. R., 167
Lodini, A. See Millet, P., 679
Lohmann, C. H. See Bannister, S. R., 167
Lu, J. See Han, Y., 511
Luo, J. See Cai, K., 398

Machy, D. See Letourneur, D., 94
Magne, D. See Khairoun, I., 633
Malchiodi-Albedi, F.
—; Morgillo, A.; Formisano, G.; Paradisi, S.; Perilli, R.; Scalzo, G. C., Scorcia, G.; Caiazza, S.: Biocompatibility assessment of silicone oil and perfluorocarbon liquids used in retinal reattachment surgery in rat retinal cultures, 548
Mann, B. K.
—; West, J. L.: Cell adhesion peptides alter smooth muscle cell adhesion, proliferation, migration, and matrix protein synthesis on modified surfaces and in polymer scaffolds, 86
Marcon-Bachari, E. See Letourneur, D., 94
Matsuda, T. See Sonoda, H., 191
Matsumoto, M.
—; Chosa, E.; Nabeshima, K.; Shikinami, Y.; Tajima, N.: Influence of bioresorbable, unsintered hydroxyapatite/poly-L-lactide composite films on spinal cord, nerve roots, and epidural space, 101
Matsumoto, T.
—; Okazaki, M.; Inoue, M.; Ode, S.; Chang-Chien, C.; Nakao, H.; Hamada, Y.; Takahashi, J.: Biodegradation of carbonate apatite/collagen composite membrane and its controlled release of carbonate apatite, 651
Matsumura, K.
—; Hyon, S.-H.; Nakajima, N.; Peng, C.; Iwata, H.; Tsutsumi, S.: Adhesion between poly(ethylene-*co*-vinyl alcohol) (EVA) and titanium, 309
McCloskey, C. B. See Jahangir, A. R., 135
McClung, W. G. See Jahangir, A. R., 135
McDevitt, T. C.
—; Angello, J. C.; Whitney, M. L.; Reinecke, H.; Hauschka, S. D.; Murry, C. E.; Stayton, P. S.: *In vitro* generation of differentiated cardiac myofibers on micropatterned laminin surfaces, 472
McFarland, C. D. See Tsai, W.-B., 348
Meddahi, A.
—; Alexakis, C.; Papy, D.; Caruelle, J.-P.; Barritault, D.: Heparin-like polymer improved healing of gastric and colic ulceration, 497
Messina, C. See Hallab, N. J., 420
Michel, J.-B. See Letourneur, D., 94
Mikos, A. G. See Vehof, J. W. M., 241
Millet, P.
—; Girardin, E.; Braham, C.; Lodini, A.: Stress influence on interface in plasma-sprayed hydroxyapatite coatings on titanium alloy, 679
Miyakawa, S. See Ito, A., 224
Moghe, P. V. See Rosenson-Schloss, R. S., 8

Montay, G. See Han, Y., 511
Mooney, D. J. See Peters, M. C., 668
Mooney, D. J. See Rowley, J. A., 217
Mooradian, D. L. See Weisenberg, B. A., 283
Morgillo, A. See Malchiodi-Albedi, F., 548
Murry, C. E. See McDevitt, T. C., 472

Nabeshima, K. See Matsumoto, M., 101
Nagaoka, S. See Kanno, M., 53
Nakajima, N. See Matsumura, K., 309
Nakamura, S. See Ueshima, M., 578
Nakamura, T. See Shinzato, S., 556
Nakamura, T. See Shinzato, S., 585
Nakamura, T. See Uchida, M., 277
Nakao, H. See Matsumoto, T., 651
Nakayama, Y. See Sonoda, H., 191
Navarro, X. See Ceballos, D., 517
Nawa, M. See Uchida, M., 277
Newman, K. D.
—; Elamanchili, P.; Kwon, G. S.; Samuel, J.: Uptake of poly(D,L-lactic-*co*-glycolic acid) microspheres by antigen-presenting cells *in vivo*, 480
Nijhof, M. W. See Oosterbos, C. J. M., 339
Noël, B. See Anselme, K., 529
Noshi, T. See Ikeuchi, M., 61

Ode, S. See Matsumoto, T., 651
Oegema, T. R. See Grassl, E. D., 607
Ogier, J. See Tryoen-Tóth, P., 657
Oh, S. H. See Lee, J. H., 44
Ohan, M. P.
—; Weadock, K. S.; Dunn, M. G.: Synergistic effects of glucose and ultraviolet irradiation on the physical properties of collagen, 384
Ohgushi, H. See Ikeuchi, M., 61
Ohyama, T. See Zhang, Q., 502
Okada, K. See Siriphannon, P., 175
Okano, T. See Shimizu, T., 110
Okazaki, M. See Matsumoto, T., 651
Ong, J. L. See Zhu, X., 333
Onuma, K. See Ito, A., 224
Oosterbos, C. J. M.
—; Vogely, H. Ch.; Nijhof, M. W.; Fleer, A.; Verbout, A. J.; Tonino, A. J.; Dhert, W. J. A.: Osseointegration of hydroxyapatite-coated and noncoated Ti6Al4V implants in the presence of local infection: A comparative histomorphometrical study in rabbits, 339
Ooya, T. See Park, H. D., 186
Osorio, R.
—; Ceballos, L.; Tay, F.; Cabrerizo-Vilchez, M. A.; Toledano, M.: Effect of sodium hypochlorite on dentin bonding with a polyalkenoic acid-containing adhesive system, 316

Papy, D. See Meddahi, A., 497
Paradisi, S. See Malchiodi-Albedi, F., 548
Park, H. D.
—; Lee, W. K.; Ooya, T.; Park, K. D.; Kim, Y. H.; Yui, N.: Anticoagulant activity of sulfonated polyrotaxanes as blood-compatible materials, 186
Park, J. U.
—; Tsuchiya, T.: Increase in gap-junctional intercellular communications (GJIC) of normal human dermal fibroblasts (NHDF) on surfaces coated with high-molecular-weight hyaluronic acid (HMW HA), 541
Park, K. D. See Park, H. D., 186
Parnigotto, P. P. See Dettin, M., 466
Pasquato, A. See Dettin, M., 466
Pellé, A. See Letourneur, D., 94
Peng, C. See Matsumura, K., 309
Perilli, R. See Malchiodi-Albedi, F., 548
Peters, M. C.
—; Polverini, P. J.; Mooney, D. J.: Engineering vascular networks in porous polymer matrices, 668
Planell, J. A. See Rodríguez-Lorenzo, L. M., 159
Poelstra, K. A.
—; Barekzi, N. A.; Rediske, A. M.; Felts, A. G.; Slunt, J. B.; Grainger, D. W.: Prophylactic treatment of gram-positive and gram-negative abdominal implant infections using locally delivered polyclonal antibodies, 206
Polverini, P. J. See Peters, M. C., 668

Qing, T. See Cai, K., 398

Ramamurthi, A.
—; Vesely, I.: Smooth muscle cell adhesion on crosslinked hyaluronan gels, 196
Ravion, O. See Anastase-Ravion, S., 375
Rediske, A. M. See Poelstra, K. A., 206
Reinecke, H. See McDevitt, T. C., 472
Rini, C. J. See Latour, R. A., Jr., 564
Rodríguez-Lorenzo, L. M.
—; Vallet-Regí, M.; Ferreira, J. M. F.: Fabrication of porous hydroxyapatite bodies by a new direct consolidation method: starch consolidation, 232
Rodríguez-Lorenzo, L. M.
—; Vallet-Regí, M.; Ferreira, J. M. F.; Ginebra, M. P.; Aparicio, C.; Planell, J. A.: Hydroxyapatite ceramic bodies with tailored mechanical properties for different applications, 159
Roebuck, K. A. See Hallab, N. J., 420
Rosenson-Schloss, R. S.
—; Chang, C. C.; Constantinides, A.; Moghe, P. V.: Alteration of leukocyte motility on plasma-conditioned prosthetic biomaterial, ePTFE, via a flow-responsive cell adhesion molecule, CD43, 8
Rossi, A. M. See Sena, L. Á.
Rowley, J. A.
—; Mooney, D. J.: Alginate type and RGD density control myoblast phenotype, 217

Samuel, J. See Newman, K. D., 480
Sanders, J. E.
—; Baker, A. B.; Golledge, S. L.: Control of *in vivo* microvessel ingrowth by modulation of biomaterial local architecture and chemistry, 36
Santerre, J. P. See Jahangir, A. R., 135
Sarmadi, M. See Kohn, D. H., 292
Sasaki, T. See Shimizu-Ishiura, M., 269
Scalzo, G. C. See Malchiodi-Albedi, F., 548
Schaaf, P. See Tryoen-Tóth, P., 657
Schmalzried, T. P. See Beaulé, P. E., 411
Schuster, G. S. See Lapp, C. A., 30
Schüttler, M. See Ceballos, D., 517
Schwartz, Z. See Bannister, S. R., 167
Scorcia, G. See Malchiodi-Albedi, F., 548
Sena, L. Á.
—; de Andrade, M. C., Rossi, A. M., Soares, G. A.: Hydroxyapatite deposition by electrophoresis on titanium sheets with different surface finishing, 1
Shibata, T. See Shimizu, T., 110
Shikinami, Y. See Matsumoto, M., 101

Shimizu, T.
—; Yamato, M.; Akutsu, T.; Shibata, T.; Isoi, Y.; Kikuchi, A.; Umezu, M.; Okano, T.: Electrically communicating three-dimensional cardiac tissue mimic fabricated by layered cultured cardiomyocyte sheets, 110
Shimizu-Ishiura, M.
—; Tanaka, S.; Lee, W.-S.; Debari, K.; Sasaki, T.: Effects of enamel matrix derivative to titanium implantation in rat femurs, 269
Shinzato, S.
—; Nakamura, T.; Ando, K.; Kokubo, T.; Kitamura, Y.: Mechanical properties and osteoconductivity of new bioactive composites consisting of partially crystallized glass beads and poly(methyl methacrylate), 556
Shinzato, S.
—; Nakamura, T.; Kokubo, T.; Kitamura, Y.: Composites consisting of poly(methyl methacrylate) and alumina powder: An evaluation of their mechanical and biological properties, 585
Shive, M. S.
—; Brodbeck, W. G.; Colton, E.; Anderson, J. M.: Shear stress and material surface effects on adherent human monocyte apoptosis, 148
Simon, C. G. Jr. See Washburn, N. R., 20
Singla, A.
—; Lee, C. H.: Effect of elastin on the calcification rate of collagen-elastin matrix systems, 368
Sipe, R. V. See Frank, E. H., 118
Siriphannon, P.
—; Kameshima, Y.; Yasumori, A.; Okada, K.; Hayashi, S.: Comparative study of the formation of hydroxyapatite in simulated body fluid under static and flowing systems, 175
Sittig, C. See Li, D., 325
Slunt, J. B. See Poelstra, K. A., 206
Soares, G. A. See Sena, L. Á.
Sonoda, H.
—; Urayama, S.-I.; Takamizawa, K.; Nakayama, Y.; Uyama, C.; Yasui, H.; Matsuda, T.: Compliant design of artificial graft: compliance determination by new digital X-ray imaging system-based method, 191
Spauwen, P. H. M. See Vehof, J. W. M., 241
Spencer, P. See Wang, Y., 300
Stayton, P. S. See McDevitt, T. C., 472
Steele, J. G. See Walboomers, X. F., 445
Stieglitz, T. See Ceballos, D., 517
Sugimura, M. See Ikeuchi, M., 61
Sweany, J. M. See Kader, K. N., 405
Sylvia, V. L. See Bannister, S. R., 167

Tajima, N. See Matsumoto, M., 101
Takahashi, J. See Matsumoto, T., 651
Takamizawa, K. See Sonoda, H., 191
Tanaka, K. See Uchida, M., 277
Tanaka, S. See Shimizu-Ishiura, M., 269
Tanaka, S. See Ueshima, M., 578
Tay, F. See Osorio, R., 316
ter Brugge, P. J.
—; Wolke, J. G. C.; Jansen, J. A.: Effect of calcium phosphate coating crystallinity and implant surface roughness on differentiation of rat bone marrow cells, 70
Textor, M. See Wieland, M., 434
Toledano, M. See Osorio, R., 316
Tona, A. See Washburn, N. R., 20
Tonino, A. J. See Oosterbos, C. J. M., 339
Tranquillo, R. T. See Grassl, E. D., 607
Treboux, G. See Ito, A., 224
Tryoen-Tóth, P.
—; Vautier, D.; Haikel, Y.; Voegel, J.-C.; Schaaf, P.; Chluba, J.; Ogier, J.: Viability, adhesion, and bone phenotype of osteoblast-like cells on polyelectrolyte multilayer films, 657
Tsai, W.-B.
—; Grunkemeier, J. M.; McFarland, C. D.; Horbett, T. A.: Platelet adhesion to polystyrene-based surfaces preadsorbed with plasmas selectively depleted in fibrinogen, fibronectin, vitronectin, or von Willebrand's factor, 348
Tsuchiya, T. See Park, J. U., 541
Tsutsumi, S. See Ito, A., 224
Tsutsumi, S. See Matsumura, K., 309
Tuan, R. S. See Li, W.-J., 613

Uchida, M.
—; Kim, H.-M.; Kokubo, T.; Nawa, M.; Asano, T.; Tanaka, K.; Nakamura, T.: Apatite-forming ability of a zirconia/alumina nano-composite induced by chemical treatment, 277
Ueshima, M.
—; Tanaka, S.; Nakamura, S.; Yamashita, K.: Manipulation of bacterial adhesion and proliferation by surface charges of electrically polarized hydroxyapatite, 578
Umezu, M. See Shimizu, T., 110
Urayama, S.-I. See Sonoda, H., 191
Uyama, C. See Sonoda, H., 191

Valderrama, E. See Ceballos, D., 517
Valero-Cabré, A. See Ceballos, D., 517
Vallet-Regí, M. See Rodríguez-Lorenzo, L. M., 159
Vallet-Regí, M. See Rodríguez-Lorenzo, L. M., 232
van der Waerden, J.-P. C. M. See Vehof, J. W. M., 241
Vautier, D. See Tryoen-Tóth, P., 657
Vehof, J. W. M.
—; Fisher, J. P.; Dean, D.; van der Waerden, J.-P. C. M.; Spauwen, P. H. M.; Mikos, A. G.; Jansen, J. A.: Bone formation in transforming growth factor β-1-coated porous poly(propylene fumarate) scaffolds, 241
Verbout, A. J. See Oosterbos, C. J. M., 339
Vermes, C. See Hallab, N. J., 420
Vesely, I. See Ramamurthi, A., 196
Voegel, J.-C. See Tryoen-Tóth, P., 657
Vogel, M. See Letourneur, D., 94
Vogely, H. Ch. See Oosterbos, C. J. M., 339

Walboomers, X. F.
—; Dalton, B. A.; Evans, M. D.; Steele, J. G.; Jansen, J. A.: Transforming growth factor-β 1, 2, and 3 can inhibit epithelial tissue outgrowth on smooth and microgrooved substrates, 445
Walker, P. S. See Beaulé, P. E., 411
Walsh, W. R. See Yu, Y., 392
Wang, C. See Zhang, Q., 502
Wang, Y.
—; Spencer, P.: Analysis of acid-treated dentin smear debris and smear layers using confocal Raman microspectroscopy, 300
Washburn, N. R.
—; Simon, C. G. Jr.; Tona, A.; Elgendy, H. M.; Karim, A.; Amis, E. J.: Co-extrusion of biocompatible polymers for scaffolds with co-continuous morphology, 20
Weadock, K. S. See Ohan, M. P., 384

Weisenberg, B. A.
—; Mooradian, D. L.: Hemocompatibility of materials used in microelectromechanical systems: Platelet adhesion and morphology *in vitro*, 283
Weiss, P. See Khairoun, I., 633
West, J. L. See Mann, B. K., 86
Whitney, M. L. See McDevitt, T. C., 472
Wieland, M.
—; Chehroudi, B.; Textor, M.; Brunette, D. M.: Use of Ti-coated replicas to investigate the effects on fibroblast shape of surfaces with varying roughness and constant chemical composition, 434
Wolke, J. G. C. See ter Brugge, P. J., 70
Wright, A. J. See Barralet, J. E., 360
Xie, H. See Cai, K., 398
Xu, K. See Han, Y., 511

Yahia, L. See Beaulé, P. E., 411
Yamamoto, K. See Ikeuchi, M., 61
Yamashita, K. See Ueshima, M., 578
Yamato, M. See Shimizu, T., 110
Yang, J.-L. See Yu, Y., 392
Yang, Z. See Cai, K., 398
Yao, K. See Cai, K., 398
Yasui, H. See Sonoda, H., 191
Yasumori, A. See Siriphannon, P., 175
Yoshikawa, T. See Ikeuchi, M., 61
Yu, Y.
—; Yang, J.-L.; Chapman-Sheath, P. J.; Walsh, W. R.: TGF-β, BMPs, and their signal transducing mediators, Smads, in rat fracture healing, 392
Yui, N. See Park, H. D., 186

Zhang, Q.
—; Wang, C.; Babukutty, Y.; Ohyama, T.; Kogoma, M.; Kodama, M.: Biocompatibility evaluation of ePTFE membrane modified with PEG in atmospheric pressure glow discharge, 502
Zhu, X.
—; Ong, J. L.; Kim, S.; Kim, K.: Surface characteristics and structure of anodic oxide films containing Ca and P on a titanium implant material, 333

Journal of Biomedical Materials Research
Subject Index—Volume 60

Abdominal surgery, 206
Acid-etched surface, 325
Acid etching, 316
Additives, 135
Adhesion, 316, 578
Adhesion peptide, 86
Adhesion proteins, 348
Adhesive proteins, 135
Alginates, 217, 252
Alkaline phosphatase, 167, 452
Alumina, 585
Amphiphilic surface-modifying polymer, 186
Angiogenesis, 36, 668
Angiography technique, 191
Animal model, 339
Anodic oxide, 333
Anorganic, 118
Antibody, 206
Anticoagulant activity, 186
Antigen delivery system, 480
Antigen-presenting cells, 480
Apatite, 277
Apatite- and wollastonite-containing glass ceramic (AW-GC), 556
Apoptosis, 148, 487
Applications, 159
Atelopeptide collagen, 61
Atomic force microscopy, 541

β-glycerophosphate sodium, 333
Backscattered electron imaging, 269
Bacteria, 578
Beta radiation delivery system, 260
Bioactive, 643
Bioactive composite, 556
Bioactive glass, 79
Bioactive materials, 175
Bioactivity, 101, 277
Biocompatibility, 20, 420, 548, 651
Biodegradable glass, 260
Biodegradable polyurethanes, 592
Biodegradation, 651
Biomaterial design, 217
Biomaterials, 206, 348, 466, 548
Blood-compatible coating material, 44
Blood-compatible materials, 186
Blood filter, 502
BMPs, 392
Bond strength, 511
Bone histomorphometry, 339
Bone marrow stromal cells, 292
Bone morphogenetic protein, 61
Bone phenotype, 657
Bone regeneration, 241, 633
Bone replacement materials, 20
Borate glass, 260
Bovine bone, 118

Calcification, 368
Calcium acetate, 333
Calcium binding, 592
Calcium phosphate, 70
Calcium phosphate cement, 633
Carbonate apatite, 360, 651
Carbonated apatite, 633
Carbonated hydroxyapatite, 511
Cardiac tissue engineering, 110
Cardiomyocyte, 110, 472
$CaSiO_3$ ceramics, 175
CD43, 8
Cell adhesion, 126, 405, 529, 657
Cell arrays, 472
Cell attachment and growth, 196
Cell engineering, 126
Cell migration, 8
Cell seeding, 405
Cell shape, 434
Cell sheet, 110
Cellular uptake, 480
Ceramics processing, 232
Characterization, 1
Chemical treatment, 277
Chemiluminescence, 79
Chitosan, 398
Coating, 1, 339
Colitis, 497
Collagen, 292, 316, 384
Collagen-elastin matrix, 368
Collagen synthesis, 607
Colloidal processing, 232
Complement activation, 53
Compliance, 191
Composites, 101, 585
Composition, 458
Corrosion, 458
Crosslinking, 384
Crystal phase, 585
Crystallinity, 70, 333
Crystallized glass, 556
Curing, 53
Cytokines, 375, 657
Cytotoxicity, 452

Deciduous pulpal fibroblast, 452
Delivery system, 360
Dendritic cells, 480
Dental implants, 1
Dental restorative materials, 452
Dentin, 300, 316
Dextran, 94
Dielectric constant, 643
Digital X-ray imaging system, 191
Dissolution, 511
Divinyl sulfone, 196
DMAEMA, 30
Drug delivery, 668

Elastin, 368
Electric communication, 110
Electrical polarization, 578
Electrophoresis, 1
Electrospinning, 613
Enamel matrix derivative, 269
Encapsulation, 252
Endothelial cell proliferation, 94
Endothelial cells, 668
Enthalpy, 564
Entropy, 564
Enzyme resistance, 384
Epithelial tissue outgrowth, 445
EPTFE, 8
Ethanol, 368
Expanded polytetrafluoroethylene (ePTFE), 502
Extracellular matrix, 86

Fibrin gel, 607
Fibrinogen, 348
Fibrinolysis, 607
Fibroblasts, 30, 434
Fibronectin, 487
Flowing system, 175
Fluorinated polyimide, 53
Fluoropolymer, 405

Fluro-polymer, 135
Foreign-body giant cell, 487
4-Methoxyphenol, 30
Fracture healing, 392

Gap junctional intercellular communication, 541
Gastric ulceration, 497
Genetic engineering, 405
Gibbs free energy, 564
Glass microspheres, 260
Glucose, 384
Gram-positive, 206
Grooved surface, 529
Growth factor-β, 445
GTR membrane, 651

Hemocompatibility, 283
Heparin, 94
Heparin-like, 375
Heparin-like molecule, 497
Human macrophage, 487
Human osteoblasts, 529
Hyaluronan, 196
Hyaluronic acid, 541
Hydrogels, 196
Hydroxyapatite, 1, 101, 175, 232, 339, 360, 578, 643
Hydroxyapatite ceramic bodies, 159
Hydroxyapatite coatings, 679
Hylan, 196

Immunoblots, 622
Immunoglobulin G, 487
Immunohistochemistry, 269, 392
Immunoisolation, 252
Implant, 206, 679
In vitro degradation, 592
Infant, 622
Infection, 206, 339
Inflammation, 30
Injectable bone substitute, 61
Intercalated disks, 472
Interfacial shear strength, 325
Interfacial stiffness, 325
Interleukin, 375
Interleukin-6, 30

Knee simulator, 411

Lap shear adhesive strength, 309
Laser machining, 36
Leukocytes, 8
Lipopolysaccharide, 375
Local delivery, 206
Lumbar spine fusion, 118

Macrophages, 79
Marrow mesenchymal stem cells, 61
Mechanical properties, 159
MEMS, 283
Mesenchymal stem cell, 613
Metal ion, 420
Metal toxicity, 420
MG-63 osteoblasts, 420
Microfluidics, 126
Microgrooved substrates, 445
Micropatterning, 126, 472
Microspectroscopy, 300
Migration, 86
Molecular modeling, 564
Monetite, 633
Monocytes, 79, 148, 375

Nanocrystalline, 511
Negatively charged group, 44
Nerve regeneration, 517
Neural prosthesis, 517
Neutron diffraction, 679
Neutrophil adhesion, 53
Ni-Cr-Mo alloy, 458
Noncemented implants, 339
Normal human dermal fibroblast, 541

Osteoblast adhesion, 466
Osteoblast-like cells, 657
Osteoblasts, 167, 398
Osteocalcin, 167
Osteoconductivity, 556, 585
Osteogenesis, 61
Osteoinduction, 241
Osteolysis, 420

Passive film, 458
Perfluorocarbon liquids, 548
Peripheral nerve, 517
Permeation, 368
PGE_2, 167
PH, 292
Physiologic shear, 8
Pitting, 458
Plasma, 622
Plasma treatment, 502
Platelet adhesion, 44, 283, 348, 502
Platelet morphology, 283
Platelets, 135
PLGA, 613
PLGA microspheres, 480
Poly (D,L-lactic acid), 398
Poly(ε-caprolactone), 592
Poly(ethylene-*co*-vinyl alcohol) (EVA), 309
Poly(ethylene glycol), 126
Poly(ethylene oxide), 126, 592
Poly(methyl methacrylate) (PMMA), 556, 585
Poly-L-lactide, 101
Poly-L-lysine, 252
Polyelectrolyte multilayer films, 657
Polyether-urethane, 135
Polyethylene, 411
Polyethylene glycol, 86
Polyethylene oxide (PEO), 44
Polyimide, 517
Polymer processing, 20
Polymers, 292
Polymers scaffolds, 20
Polyrotaxane, 186
Polyurethane, 148
Porosity, 643
Porous bioceramics, 232
Porous poly(propylene fumarate), 241
Proliferation, 578
Prosthetic biomaterial, 8
Protein adsorption, 44, 53, 348, 502, 564, 622
Protein release, 360

Rabbit model, 118
Radiation synovectomy, 260
Raman, 300
Rat femur, 269
Rat osteoblasts, 70
Recombinant proteins, 241
Regenerative electrode, 517
Removal torque values, 325
Residual stress, 511
Resorption, 224
Retinal cultures, 548
RGD, 217, 487
RGD sequences, 466
RGTA, 497
Rheumatoid arthritis, 260
Roughness, 333

Sandblasted and acid-etched surface, 325
Scaffolds, 241, 613
Scrape loading and dye transfer, 541
SDS-PAGE, 622
Secreted protein acidic and rich in cysteine (SPARC), 36
Self-assembled monolayers, 564
Shear force, 167
Shear stress, 148
Sieve, 517
Silicone oil, 548
Simulated body fluid (SBF), 175, 277
Sintered, 643
Skeletal muscle, 217
Smads, 392
Smear, 300
Smooth muscle cell, 607
Sodium hypochlorite treatment, 316
Sol-gel, 360
Solubility product, 224
Spinal cord, 101
Starch consolidation, 232
Stress, 679
Succinate dehydrogenase, 452
Sulfonated polyrotaxane, 186
Surface charges, 578

Surface grafting, 36
Surface modification, 135, 398
Surface roughness, 70, 167
Surface topography, 529
Synthetic peptides, 466
Synthetic polymer, 497
Synthetic polysaccharides, 94

T-peel strength, 309
Temperature-responsive culture surface, 110
TGF-β, 392
TGF-β1, 167
Three-dimensional reconstruction, 434
Thromboembolism, 622
Thrombogenesis, 135
Thrombospondin, 36
Ti-coated epoxy-resin replicas, 434
Tissue engineering, 20, 86, 217, 292, 472, 607, 613, 668
Tissue equivalent, 607
Titanium, 70, 167, 309, 333, 529
Titanium implantation, 269
Titanium implants, 325
TNFα, 79
Topography, 434
Total knee replacement, 411
Total knee retrieval, 411
Transforming growth factor-β, 241
Tricalcium phosphate, 224
Tumor necrosis factor-alpha, 148
Type I collagen, 651
Ultraviolet irradiation, 384

Vascular grafts, 405
Vascular prostheses, 94
VEGF, 668
Vitronectin, 466, 487

Wear particle morphology, 411
Wound healing, 497

X-ray diffraction, 679

Zinc, 224
Zinc-containing tricalcium phosphate, 224
Zirconia/alumina nano-composite, 277